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| 09/997,732 | 11/29/2001 | James A. Proctor JR. | TAN-2-1403.05.US | 4009 |

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| EXAMINER | |
|---|---|
| MATTIS, JASON E | |
| **ART UNIT** | **PAPER NUMBER** |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/997,732 | PROCTOR, JAMES A. | |
| | Examiner | Art Unit | |
| | Jason E. Mattis | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on 3/37/07.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 37-67 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 37-67 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This Office Action is in response to the amendment filed 3/27/07. Claims 1-36 have been cancelled. New claims 60-67 have been added. Claims 37-67 are currently pending in the application.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 37, 42, 43, 48-50, 53, 61, 63, and 65 are rejected under 35 U.S.C. 102(e) as being anticipated by Noneman et al. (U.S. Pat. 5708656).

**With respect to claim 37**, Noneman et al. discloses a subscriber unit **(See column 3 lines 26-37 and Figures 1 and 2 of Noneman et al. for reference to a mobile station, which is a subscriber unit)**. Noneman et al. also discloses a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system **(See column 3 lines 26-56 and Figures 1 and 2 of Noneman et al. for reference to the mobile station having**

**transmitter and receiver, which together comprise a transceiver, providing wireless communications of digital CDMA signals)**. Noneman et al. further discloses a bandwidth manager coupled to the wireless transceiver and configured to receive a time slot assignment from a remote wireless transceiver **(See column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard that uses time slot assignments sent from a base station to a mobile unit, meaning the mobile unit must have a bandwidth manager to receive slot assignments)**. Noneman et al. also discloses the wireless transceiver configured to transmit an idle mode signal based upon the time slot assignment during an idle mode connection wherein the transceiver is powered on but not actively transmitting data so that the transceiver can maintain timing alignment **(See the abstract, column 5 lines 47-67, and Figure 4 of Noneman et al. for reference to the mobile station operating in an idle mode when there is no packet data to be transmitted wherein idle packets are transmitted at an idle rate so that the mobile station can maintaining timing synchronization)**.

**With respect to claim 43**, Noneman et al. discloses a CDMA mobile terminal **(See column 3 lines 26-56 and Figures 1 and 2 of Noneman et al. for reference to a CDMA mobile unit, which is a subscriber unit)**. Noneman et al. also discloses a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system including transmission of a synchronization signal to establish a communications session **(See the Abstract, column 3 lines 26-56, and Figures 1 and 2 of Noneman et al. for reference to the**

**mobile station having transmitter and receiver, which together comprise a transceiver, providing wireless communications of digital CDMA signals including idle packets that comprise a synchronization signal establishing a communications session)**. Noneman et al. further discloses a bandwidth manager coupled to the wireless transceiver and configured to allocate subchannels on an as needed basis when the wireless transceiver is actively sending data and receive a time slot assignment from a CDMA base station transmitting a synchronization signal **(See column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard that uses time slot assignments on an as needed basis and synchronization signals sent from a base station to a mobile unit, meaning the mobile unit must have a bandwidth manager to allocate subchannels when the mobile unit is actively sending data and receive the time slot assignments and synchronization signals)**. Noneman et al. also discloses the wireless transceiver configured to transmit the synchronization signal based upon the time slot assignment during an idle mode connection wherein the transceiver is powered on but not actively transmitting data so that the transceiver can maintain timing alignment **(See the abstract, column 5 lines 47-67, and Figure 4 of Noneman et al. for reference to the mobile station operating in an idle mode when there is no packet data to be transmitted wherein idle packets, which are synchronization signals, are transmitted at an idle rate so that the mobile station can maintaining timing synchronization)**.

**With respect to claim 49**, Noneman et al. discloses a subscriber unit **(See column 3 lines 26-37 and Figures 1 and 2 of Noneman et al. for reference to a mobile station, which is a subscriber unit)**. Noneman et al. also discloses a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system with the signals being communicated using at least one radio frequency channel **(See column 3 lines 26-56 and Figures 1 and 2 of Noneman et al. for reference to the mobile station having transmitter and receiver, which together comprise a transceiver, providing wireless communications of digital CDMA signals, which inherently use at least one radio frequency channel)**. Noneman et al. further discloses a bandwidth manager coupled to the wireless transceiver and configured to allocate subchannels on an as needed basis with the number of subchannels changing during a session **(See the abstract and column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard that uses time slot subchannel assignments on an as needed basis sent from a base station to a mobile unit, meaning the mobile unit must have a bandwidth manager to allocate subchannels and change the number of subchannels to accommodate changing data rates during a communications session)**. Noneman et al. also discloses the wireless transceiver configured to transmit an idle mode signal based upon the time slot assignment during an idle mode connection wherein the transceiver is powered on but not actively transmitting data **(See the abstract, column 5 lines 47-67, and Figure 4 of Noneman et al. for reference to**

**the mobile station operating in an idle mode when there is no packet data to be transmitted wherein idle packets are transmitted at an idle rate).**

**With respect to claims 42 and 48**, Noneman et al. discloses receiving an updated time slot assignment when a subsequent idle mode signal is to be transmitted **(See the abstract and column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard meaning updated time slots assignments must be received by the mobile station when the mobile station is in the idle mode such that less subchannels are assigned to the mobile station).**

**With respect to claim 50**, Noneman et al. discloses the bandwidth manager configured to receive a time slot assignment from a remote wireless transceiver **(See column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard that uses time slot assignments sent from a base station to a mobile unit, meaning the mobile unit must have a bandwidth manager to receive slot assignments).** Noneman et al. also discloses the wireless transceiver configured to transmit an idle mode signal based upon the time slot assignment during an idle mode connection wherein the transceiver is powered on but not actively transmitting data so that the transceiver can maintain timing alignment **(See the abstract, column 5 lines 47-67, and Figure 4 of Noneman et al. for reference to the mobile station operating in an idle mode when there is no packet data to be transmitted wherein idle packets are**

**transmitted at an idle rate so that the mobile station can maintaining timing synchronization).**

**With respect to claim 53**, Noneman et al. discloses the idle signals being transmitted at predetermined intervals **(See the abstract of Noneman et al. for reference to transmitting the idle packets at a predetermined idle rate, which corresponds to a predetermined interval).**

**With respect to claims 61, 63, and 65**, Noneman et al. discloses that the idle mode signal is a gated idle mode signal **(See the abstract of Noneman et al. for reference to transmitting the idle packets at a predetermined idle rate, which means the idle packets are gated at that rate).**

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 38, 44, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Fenton et al. (U.S. Pat. 5101416).

**With respect to claims 38 and 44**, Noneman et al. does not disclose maintaining a code phase lock with the wireless transceiver based on the idle mode signal.

**With respect to claims 54 and 55**, Noneman et al. does not specifically disclose selecting an idle mode signal spreading code and transmitting the idle mode signal comprising the code during the idle mode at a rate such that a code phase lock is maintained.

**With respect to claims 38, 44, 54, and 55**, Fenton et al. in the field of communications discloses selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained **(See the abstract and column 12 lines 6-12 of Fenton et al. for reference to using a signal containing a selected spreading code to maintain a code phase lock)**. Selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained has the advantage of allowing a mobile unit to remain code synchronized to a base station.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Fenton et al., to combine selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained, as suggested by Fenton et al., with the system and method of Noneman et al., with the motivation being to allow a mobile unit to remain code synchronized to a base station.

6. Claims 39-41, 45-47, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Storm et al. (U.S. Pat. 6016312).

**With respect to claims 39-41, 45-47, and 51**, Noneman et al. does not disclose the idle signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information.

**With respect to claims 39-41, 45-47, and 51**, Storm et al., in the field of communications, discloses a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information **(See column 3 line 53 to column 4 line 6 and column 4 lines 45-59 of Storm et al. for reference to a using a pilot signal with a short code having timing indicators to synchronize timing)**. Using a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information has the advantage of allowing timing to be synchronized in a CDMA system.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Storm et al., to combine using a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information, as suggested by Storm et al., with the system and method of Noneman et al., with the motivation being to allow timing to be synchronized in a CDMA system.

7. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Nakano et al. (U.S. Pat. 5559789).

**With respect to claim 52**, Noneman et al. does not disclose receiving a power control message, computing a power level, and transmitting signals using the computed power level.

**With respect to claim 52**, Nakano et al., in the field of communications, discloses receiving a power control message, computing a power level, and transmitting signals using the computed power level **(See the abstract of Nakano et al. for reference to receiving power control information from a pilot signal, calculating a power level, and transmitting data using the calculated power level).** Receiving a power control message, computing a power level, and transmitting signals using the computed power level has the advantage of reducing interference in a wireless CDMA system.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Nakano et al., to combine receiving a power control message, computing a power level and transmitting signals using the computed power level, as suggested by Nakano et al., with the system and method of Noneman et al., with the motivation being to reduce interference in a wireless CDMA system.

8. Claims 56, 58, 59, and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Nakano et al. and in further view of Fenton et al.

**With respect to claim 56**, Noneman et al. discloses a subscriber unit **(See column 3 lines 26-37 and Figures 1 and 2 of Noneman et al. for reference to a mobile station, which is a subscriber unit)**. Noneman et al. also discloses a wireless transceiver configured to provide wireless communications of digital signals over a digital communications path in a wireless CDMA system **(See column 3 lines 26-56 and Figures 1 and 2 of Noneman et al. for reference to the mobile station having transmitter and receiver, which together comprise a transceiver, providing wireless communications of digital CDMA signals)**. Noneman et al. further discloses a bandwidth manager coupled to the wireless transceiver and configured to receive a time slot assignment from a remote wireless transceiver **(See column 3 lines 46-56 of Noneman et al. for reference to the mobile station operating according to IS-95A, which is a CDMA communication standard that uses time slot assignments sent from a base station to a mobile unit, meaning the mobile unit must have a bandwidth manager to receive slot assignments)**. Noneman et al. also discloses the wireless transceiver configured to transmit an idle mode signal based upon the time slot assignment during an idle mode connection wherein the transceiver is powered on but not actively transmitting data so that the transceiver can maintain timing alignment **(See the abstract, column 5 lines 47-67, and Figure 4 of Noneman et al. for reference to the mobile station operating in an idle mode when there is no packet data to be transmitted wherein idle packets are transmitted at an idle rate so that the mobile station can maintaining timing synchronization)**. Noneman et al. does not specifically disclose receiving a power control message, computing a

power level, and transmitting signals using the computed power level. Noneman et al. also does not specifically disclose selecting an idle mode signal spreading code and transmitting the idle mode signal comprising the code during the idle mode at a rate such that a code phase lock is maintained.

**With respect to claim 56**, Nakano et al., in the field of communications, discloses receiving a power control message, computing a power level, and transmitting signals using the computed power level **(See the abstract of Nakano et al. for reference to receiving power control information from a pilot signal, calculating a power level, and transmitting data using the calculated power level)**. Receiving a power control message, computing a power level, and transmitting signals using the computed power level has the advantage of reducing interference in a wireless CDMA system.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Nakano et al., to combine receiving a power control message, computing a power level and transmitting signals using the computed power level, as suggested by Nakano et al., with the system and method of Noneman et al., with the motivation being to reduce interference in a wireless CDMA system.

**With respect to claim 59**, Noneman et al. does not specifically disclose selecting an idle mode signal spreading code and transmitting the idle mode signal comprising the code during the idle mode at a rate such that a code phase lock is maintained.

**With respect to claims 56 and 59**, Fenton et al. in the field of communications discloses selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained **(See the abstract and column 12 lines 6-12 of Fenton et al. for reference to using a signal containing a selected spreading code to maintain a code phase lock)**. Selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained has the advantage of allowing a mobile unit to remain code synchronized to a base station.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Fenton et al., to combine selecting a spreading code and transmitting a signal including to spreading code at a rate such that a code phase lock is maintained, as suggested by Fenton et al., with the system and method of Noneman et al., with the motivation being to allow a mobile unit to remain code synchronized to a base station.

**With respect to claim 58**, Noneman et al. discloses the idle signals being transmitted at predetermined intervals **(See the abstract of Noneman et al. for reference to transmitting the idle packets at a predetermined idle rate, which corresponds to a predetermined interval)**.

**With respect to claim 67**, Noneman et al. discloses that the idle mode signal is a gated idle mode signal **(See the abstract of Noneman et al. for reference to transmitting the idle packets at a predetermined idle rate, which means the idle packets are gated at that rate)**.

9. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Nakano et al. and Fenton et al. as applied to claims 56, 58, 59, and 67 above, and further in view of Storm et al.

**With respect to claim 57**, the combination of Noneman et al., Nakano et al., and Fenton et al. does not disclose the idle signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information.

**With respect to claims 39-41, 45-47, and 51**, Storm et al., in the field of communications, discloses a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information **(See column 3 line 53 to column 4 line 6 and column 4 lines 45-59 of Storm et al. for reference to a using a pilot signal with a short code having timing indicators to synchronize timing)**. Using a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information has the advantage of allowing timing to be synchronized in a CDMA system.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Storm et al., to combine using a signal having a timing maker comprising a pilot signal and a short code indicative of a reference point for generation of timing correction information, as suggested by Storm et

al., with the system and method of Noneman et al., Nakano et al., and Fenton et al., with the motivation being to allow timing to be synchronized in a CDMA system.

10. Claims 60, 62, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Trans (U.S. Publication US 2001/0038674 A1).

**With respect to claims 60, 62, and 64**, Noneman et al. does not specifically disclose transmitting the idle mode signal continuously.

**With respect to claims 60, 62, and 64**, Trans, in the field of communications, discloses transmitting an idle mode signal continuously **(See page 11 paragraphs 175-176 of Trans for reference to continuously transmitting idle mode symbols)**. Transmitting an idle mode signal continuously has the advantage of allowing idle mode status and synchronization to be continuously updated.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Trans, to combine transmitting an idle mode signal continuously, as suggested by Trans, with the system and method of Noneman et al., with the motivation being to allow idle mode status and synchronization to be continuously updated.

11. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noneman et al. in view of Nakano et al. and Fenton et al. as applied to claims 56, 58, 59, and 67 above, and further in view of Trans.

**With respect to claim 66**, the combination of Noneman et al., Nakano et al., and Fenton et al. does not specifically disclose transmitting the idle mode signal continuously.

**With respect to claim 66**, Trans, in the field of communications, discloses transmitting an idle mode signal continuously **(See page 11 paragraphs 175-176 of Trans for reference to continuously transmitting idle mode symbols)**. Transmitting an idle mode signal continuously has the advantage of allowing idle mode status and synchronization to be continuously updated.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Trans, to combine transmitting an idle mode signal continuously, as suggested by Trans, with the system and method of Noneman et al., Nakano et al., and Fenton et al., with the motivation being to allow idle mode status and synchronization to be continuously updated.

### *Response to Arguments*

12. Applicant's arguments with respect to claims 37-67 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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